

Amendment

[0005]

5 The present invention has been made in view of the
aforementioned problems and the first object of the present
invention is to provide a movable body driving device which
has simple structure, allows easy adjustment, and is capable
of moving a movable body in a certain direction.

[0006]

10 The second object of the present invention is to provide
automatic drawer equipment which is capable of opening and
closing a drawer just by providing a drawer driving mechanism
with simple structure and which has premium quality.

15 Means to solve the Problems

[0007]

To achieve the aforementioned first object, the
present invention provides a movable body driving device
including a movable body which is adapted to be movable in
20 a certain direction and a driving mechanism, the driving
mechanism, comprising a rotary member rotatably supported on
a first supporting member, a driving means for rotating the
rotary member, a second supporting member which is fixed to
a fixed side, and an elastic member which is arranged between
25 the first supporting member and the second supporting member,
wherein the rotary member of the driving mechanism is engaged
with the movable body with predetermined force using elastic
force of the elastic member and the movable body is moved

by rotating the rotary member.

In the aforementioned movable body driving device, a clutch means for allowing or interrupting the transmission of the rotational torque of the driving means to the rotary member is arranged between the rotary member and the driving means.

Further, in the aforementioned movable body driving device, the first supporting member is supported on the second supporting member in such a manner as to allow linear movement of the first supporting member relative to the second supporting member and is biased by the elastic member in such a direction that the first supporting member approaches the movable body.

Further, in the aforementioned movable body driving device, the first supporting member is swingably supported on the second supporting member via a supporting shaft and is biased by the elastic member in such a direction that the free end thereof approaches the movable body.

Further, in the aforementioned movable body driving device, the rotary member is a roller and is in contact with the movable body to move the movable body by frictional force between the roller and the movable body.

Further, in the aforementioned movable body driving device, at least surface of the roller is made of a synthetic resin material. As at least the surface of the roller is made of a synthetic resin material and suitable synthetic resin (for example, urethane resin) is used as the synthetic resin material, suitable frictional force is generated in

connection with the movable body.

Further, in the aforementioned movable body driving device, the movable body is provided with an engaging member with which the rotary member is engaged.

5 Further, in the aforementioned movable body driving device, the rotary member is a roller and the engaging member is a backing member which generates frictional force in connection with the roller.

Further, in the aforementioned movable body driving
10 device, the rotary member is a pinion and the engaging member is a rack which can engages the pinion.

[0008]

To achieve the aforementioned second object, the present invention provides automatic drawer equipment
15 including a drawer which can be opened and closed relative to a frame body and a drawer driving mechanism, the drawer driving mechanism comprising a rotary member rotatably supported on a first supporting member, a driving means for rotating the rotary member, a second supporting member which
20 is fixed to the frame body, and an elastic member which is arranged between the first supporting member and the second supporting member, wherein the rotary member of the drawer driving mechanism is engaged with a lower surface of the drawer with predetermined force using elastic force of the
25 elastic member and the rotary member is rotated by the driving means to move the drawer in an opening direction and a closing direction so that the drawer is opened and closed.

In the aforementioned automatic drawer equipment, a

clutch means for allowing or interrupting the transmission of the rotational torque of the driving means to the rotary member is arranged between the rotary member and the driving means.

5 Further, in the aforementioned automatic drawer equipment, the first supporting member is supported on the second supporting member in such a manner as to allow linear movement of the first supporting member relative to the second supporting member and is biased by the elastic member
10 in such a direction that the first supporting member approaches the drawer.

 Further, in the aforementioned automatic drawer equipment, the first supporting member is swingably supported on the second supporting member via a supporting
15 shaft and is biased by the elastic member in such a direction that the free end thereof approaches the drawer.

 Further, in the aforementioned automatic drawer equipment, the rotary member is a roller and is in contact with the drawer to move the drawer by frictional force between
20 the roller and the drawer.